

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International publication date

31 March 2005 (31.03.2005)

PCT

(10) International publication number

WO 2005/028987 A1

(51) International patent classification⁷:

F28F 1/12

(72) Inventor; and

(75) Inventor/Applicant (US only): WÖLK, Gerrit [DE/DE]; Olgastrasse 126, 70180 Stuttgart (DE).

(21) International application number: PCT/EP2004/008754

(22) International filing date: 4 August 2004 (04.08.2004)

(74) Joint Representative: BEHR GMBH & CO. KG; Intellectual Property, G-IP, Mauserstrasse 3, 70469 Stuttgart (DE).

(25) Language of filing: German

(26) Language of publication: German

(30) Data relating to the priority:

103 42 241.2 11 September 2003 (11.09.2003) DE

(71) Applicant (for all designated States except US): BEHR GMBH & CO. KG [DE/DE]; Mauserstrasse 3, 70469 Stuttgart (DE).

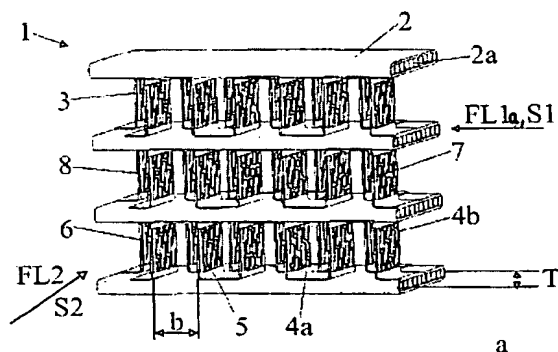
(81) Designated states (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,

[continued on next page]

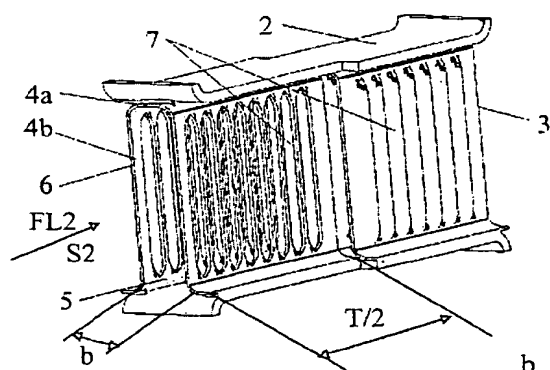
As printed

(54) Title: HEAT EXCHANGER

(54) Bezeichnung: WÄRMETAUSCHER



(57) Abstract: A heat exchanger (1), particularly for motor vehicles, comprises flat tubes (2) whose interior can be flowed through by first fluids and whose exterior can be subjected to the action of a second fluid. The flat tubes (2) are situated essentially transversal to the flowing direction of the second fluid while being parallel to one another and are interspaced in such a manner as to form flow paths for the second fluid that pass through the heat exchanger (1). Cooling ribs (3) extending between adjacent flat tubes (2) are situated in the flow paths. A number of corrugated ribs are provided, which are located one behind the other in the flowing direction of the second fluid and which are offset with regard to one another in the flowing direction of the first fluid.



(57) Zusammenfassung: Ein Wärmetauscher (1), insbesondere für Kraftfahrzeuge, weist Flachrohre (2) auf, die innen von ersten Fluiden durchströmbar sind und außen mit einem zweiten Fluid beaufschlagbar sind. Die Flachrohre (2) sind im Wesentlichen quer zur Strömungsrichtung des zweiten Fluids und parallel zueinander angeordnet sowie derart voneinander beabstandet, dass den Wärmetauscher (1) durchdringende Strömungswege für das zweite Fluid ausgebildet sind, wobei in den Strömungswegen Kühlrippen (3) angeordnet sind, die sich jeweils zwischen benachbarten Flachrohren (2) erstrecken. Als Kühlrippen (3) sind mehrere in Strömungsrichtung des zweiten Fluids hintereinander angeordnete Wellrippen vorgesehen, die in Strömungsrichtung des ersten Fluids zueinander versetzt sind.

WO 2005/028987 A1